

WHAT IS CLAIMED IS:

1. An unbalance disc detection apparatus comprising:  
a photo detector which receives, at its photo reception  
region, reflection light from a disc on which a laser light is  
5 irradiated;

a push-pull signal calculation section which obtains  
change of a light quantity detected by the photo reception region  
as a push-pull signal;

10 a tracking drive control section which turns on and off  
a tracking drive mechanism for tracing, in a radial direction  
of the disc, an objective lens for projecting the reflection  
light of the laser light on the photo reception region; and  
15 an unbalance disc discriminating section which  
discriminates whether or not a level of the push-pull signal  
exceeds a threshold value in an off-state of the tracking drive  
mechanism to discriminate an unbalance disc.

20 2. The unbalance disc detection apparatus according  
to claim 1, wherein the unbalance disc is discriminated with  
reference to a threshold value which is changed in accordance  
with the measurement rotation speed.

25 3. The unbalance disc detection apparatus according  
to claim 1, wherein the disc is driven by a motor.

4. The unbalance disc detection apparatus according  
to claim 1, wherein the threshold value is set in correspondence  
25 to a predetermined measurement rotation speed.

5. An unbalance disc detection method comprising:  
irradiating a laser light on the disc;  
receiving the laser light reflected from the disc by a  
photo detector having a photo reception region;

5 obtaining change of a light quantity detected by the photo  
reception region as a push-pull signal in an off-state of a  
tracking drive mechanism for tracing, in a radial direction of  
the disc, an objective lens for projecting the reflection light  
of the laser light on the photo reception region; and

10 discriminating whether or not a level of the push-pull  
signal exceeds a threshold value to discriminate an unbalance  
disc.

6. The unbalance disc detection method according to  
claim 5, wherein when a level of the push-pull signal does not  
15 exceed the threshold value, a measurement rotation speed is  
updated and the unbalance disc is discriminated with reference  
to a threshold value set according to the updated measurement  
rotation speed.

7. The unbalance disc detection method according to  
20 claim 4, further comprising driving the disc by a motor.

8. The unbalance disc detection method according to  
claim 4, wherein the threshold value is set in correspondence  
to a predetermined measurement rotation speed.